A Brief History of Video Games

CSE/ISE 301
Early Video Games

- A. S. Douglas creates Noughts and Crosses (Tic Tac Toe)
  - Created in 1952 for doctoral dissertation
  - Created on Cambridge University’s EDSAC computer
Early Video Games

William Higginbotham and *Tennis for Two*

- Created in 1958 for the Brookhaven National Laboratory’s annual visitor day
- Display was an oscilloscope
- Sound effects were a side-effect of the relays that made the game run
Early Video Games

- Steve Russell and *Spacewar*
  - Created in 1961 at MIT for the DEC PDP-1 computer
  - Eventually shipped as a diagnostic program with PDP-1s
Ralph Baer and Magnavox

- 1968 Baer applies for US patent for "Television Gaming and Training Apparatus" (granted 1973)
- Created a shooting game and ice hockey game
- Sold to Magnavox in 1972 which introduces Odyssey console and includes ping pong game
Bushnell and Computer Space

- Engineering major at the University of Utah
- Background in coin-operated amusement devices
- Tried to bring Spacewar to arcades as Computer War
- Unsuccessful: Interface too complicated
- “Games should be easy to learn, but hard to master”
Atari

- Atari founded by Nolan Bushnell in 1972
- Brought *Pong* to arcades
- Sued by Baer and Magnavox
- Paid a one-time license fee of $700,000
Consoles

- Atari sold to Warner Communications for $28M in 1976, Atari 2600 console released in 1977
- Open architecture allowed easy development
- First to introduce licensing of a system
Consoles

- Video Game Crash of 1982-1984
  - Warner stock falls 32% after Atari announces declining sales of consoles
  - Atari sold to Jack Tramiel (owner of Commodore)
    - Atari Corp. pulls out of console market
  - Mattel loses $225M on Intellivision
- Factors leading to the crash
  - Poor economy
  - Too many competitors (Commodore 64, Coleco)
  - Introduction of home computers
Consoles

- Nintendo and Shigeru Miyamoto
  - Released *Donkey Kong* arcade machine in 1981
  - Released Nintendo Entertainment System in 1985 with 8 bit color graphics
  - GameBoy debuts in 1989
  - During late 80’s Nintendo owned 90% of the market
Consoles

- Nintendo and Shigeru Miyamoto
  - Followed up with Super NES (16 bit) in 1990
  - Introduced Nintendo 64 with Legend of Zelda and Mario 64 in 1996
Consoles

- **Sega**
  - Created in 1952 in Japan to sell amusement games on US army bases
  - Released the popular Sega Genesis in 1990 (16 bit)
  - Final console was 1999’s Sega Dreamcast
  - Now dedicated to software
Consoles

Sony’s PlayStation

- Created out of an aborted attempt to launch a CD-ROM based system with Nintendo
- Released PlayStation in 1994
- PlayStation 2 released in 2000 maintaining backwards compatibility with hugely popular PS1 – sells over 140 million units
- 128-bit, first to use DVD technology
Consoles

- Microsoft and the Xbox
  - Xbox released in 2001
  - Based on a PC-like architecture, extensive use of DirectX
  - Initially significant money lost on each console sold
  - *Halo* and *Halo 2* are its most popular games
  - Xbox 360 released in 2005
Controversy

**Video Game Violence**

- Mortal Kombat from Acclaim Entertainment premieres in 1992
- Sen. Joseph Lieberman (D-Conn) initiates senate investigation into video game violence in 1993
- Entertainment Software Association formed in 1994 to establish ratings system for games
Designers

- Maxis and Will Wright
  - *SimCity* released in 1989, self-published by Wright
  - Other *Sim* games followed (*SimAnt*, *SimCopter*)
  - Maxis becomes part of Electronic Arts
  - Released *The Sims* in 2000
  - *The Sims* has sold more than 6 million copies so far
SimCity
Designers

- MicroProse and Sid Meier
  - Founded by Sid Meier and “Wild Bill” Stealey
  - Concentrated on strategic simulations in early years
  - *Sid Meier’s Pirates!* in 1987 was first game
  - Genre-defining *Railroad Tycoon* and *Civilization* (1991) followed
Civilization
Designers

- Cyan and Myst
  - Created by Rand and Robyn Miller
  - Released in 1993 on the Apple Macintosh
  - Helped popularize the CD-ROM drive
Myst
Notable Games

- **Space Invaders**
  - Introduced to the US in 1978
  - First big Japanese success
  - Introduced the “High Score” list to video games
Notable Games

- **Pac-Man**
  - American debut in 1981 by Midway
  - Attempt to create a completely non-violent game
  - Generated $100 million in sales during its lifetime
Notable Games

- *Tetris*
  - Created by Russian programmer Alexey Pajitnov in 1985
  - Became a pop culture sensation
  - Helped drive the success of Nintendo’s Game Boy
Studios

- Activision and Infocom
  - Activision founded by former Atari programmers
  - Lawsuit by Atari created the “royalties” system still employed by console makers today
  - Merged with Infocom
  - Still a strong player today
Studios

● Electronic Arts
  ● Created by Trip Hawkins in 1982
  ● Revolutionary business plan did three things
    ● Creative talent treated like artists
    ● Creation of in-house tools to aid cross-platform development
    ● Handle own distribution
  ● Now the largest game software company in the world
Studios

- LucasArts
  - Formed in 1982 as an offshoot of LucasFilm Ltd.
  - Created Star Wars games
Studios

- **Blizzard**
  - Started in 1991 by Frank Morhaime, Allen Adham, and Frank Pearce.
  - Released one of the seminal Real-Time Strategy games, *Warcraft*, in 1994
  - Their latest release, the MMORPG *World of Warcraft*, has become the fastest selling PC game in history
World of Warcraft
Studios

- id Software
  - Formed 1991
  - Successfully utilized Apogee’s shareware formula
  - Created first-person shooters *Wolfenstein 3D*, *DOOM*, and *Quake*
Quake